



Two Big Ideas of UbD

*Teach & Assess for
Understanding*

*3 stages of
Backward Design*

3 Stages of Backward Design

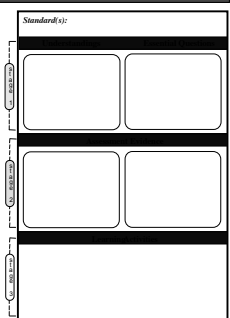
1. Identify desired results.

2. Determine acceptable evidence.

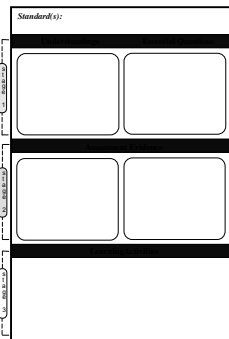
3. Plan learning experiences
& instruction.

The UbD Template...

- ✓ reflects a way of thinking and planning
- ✓ fosters a “mental template” for effective design



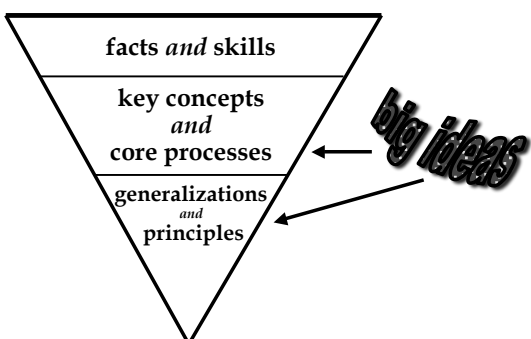
The UBD 1-page template



fosters alignment:

- ✓ content standards
- ✓ ‘big ideas’
- ✓ essential questions
- ✓ assessments
- ✓ learning activities

Structure of Knowledge



Factual Knowledge



includes...

- **vocabulary/ terminology**
- **definitions**
- **key factual information**
- **critical details**
- **important events and people**
- **sequence/timeline**

Skills



include...

- **basic skills - e.g., decoding, drawing**
- **communication skills - e.g., listening, speaking, writing**
- **thinking skills - e.g., comparing**
- **study skills - e.g., note taking**
- **interpersonal, group skills**

Concepts - transferable 'big ideas'



examples...

- | | |
|----------------------|--------------------|
| ▪ adaptation | ▪ justice |
| ▪ change | ▪ migration |
| ▪ energy | ▪ patterns |
| ▪ exploration | ▪ power |
| ▪ freedom | ▪ symbol |
| ▪ interaction | ▪ systems |

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Principles and Generalizations



examples...

- Democratic governments must balance rights of individuals with the common good.
- Correlation does not insure causality.
- Creating space away from the ball increases scoring opportunities (e.g., in soccer, football, basketball).

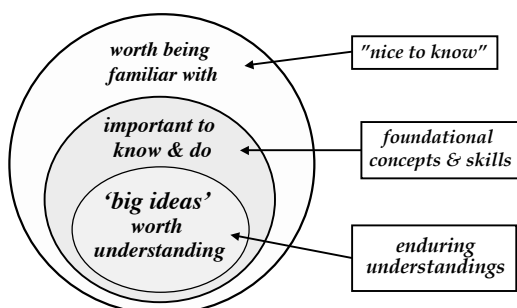
Epistemological Understandings

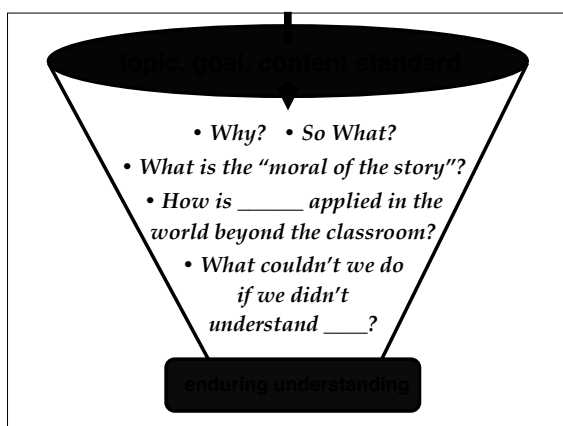


examples...

- Conclusions from scientific investigations must be verified through replication. Scientific inquiry deliberately isolates and controls key variables and their interaction.
- History involves interpretation and historians can disagree. One's interpretation of the past may be influenced by one's experiences, culture, philosophy, and political beliefs.

Establishing Curricular Priorities





Framing Understandings



- ◆ State the desired understandings as a full-sentence, specific generalization (the "moral of the story").
- ◆ Don't just specify the topic to be taught, but the understandings to be acquired.

New York MST #3 - select appropriate standard and nonstandard measurement units and tools to measure to a desired degree of accuracy



measurement

Students will understand that:

- We can describe and measure the same thing in different ways.
- There are margins of error inherent in every form of measurement.
- Correlation does not insure causality.

ARTS - recognize how technical, organizational and aesthetic elements contribute to the ideas, emotions and overall impact communicated by works of art (Oregon - CIM)



artistic expression

Students will understand that:

- Available tools and technologies influence the ways in which artists express their ideas.
- Great artists often break with established traditions, conventions, and techniques to express what they see and feel.

English 2A.4a - Analyze and evaluate the effective use of literary techniques in literature representing a variety of forms and media. (Illinois)



satire

Students will understand that:

- Authors do not always say exactly what they mean (literally).
- Satire attempts to expose & ridicule public or political immorality and stupidity through irony, sarcasm or exaggeration.

Kentucky Science Academic Expectation 2.1:
Students understand scientific ways of thinking and
working and use those methods to solve real-life
problems.



scientific process

Students will understand that:

- Scientific knowledge develops and is confirmed through carefully controlled investigations.
- The scientific method deliberately isolates and controls key variables.

Topic or theme:

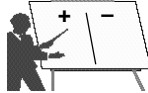
friendship



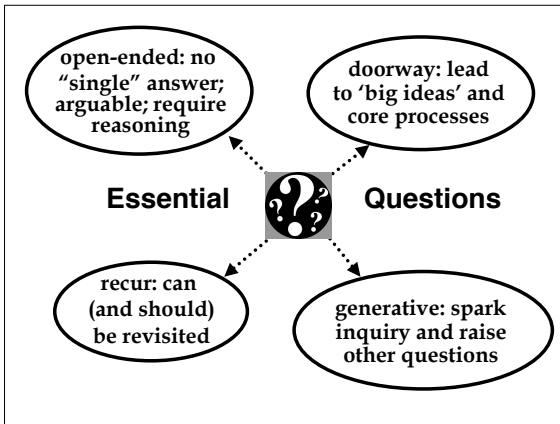
Students will understand that:


True friendship is often revealed during challenging times rather than during happy times.

Concept Attainment




1. Compare examples (+) and non-examples (-) of a concept.
2. Identify the distinguishing characteristics of each.
3. Test your working definition against new cases.
4. Refine your concept definition.






adaptation




'Big Idea' Understanding:
Living organisms have developed adaptive mechanisms to enable them to survive changing environments.

Essential Question:
In what ways do species evolve adaptations to survive changing environments?



predictive statistics



'Big Idea' Understanding:
Statistical analysis and display often reveal patterns in data, enabling us to make predictions with degrees of confidence.

Essential Question:
Can you predict the future? What will happen next? How sure are you?



practice for skills



'Big Idea' Understanding:

Effective practice requires clear goals, on-going monitoring (i.e., feedback), and adjustments when needed.

Essential Question:

If practice makes perfect, what makes "perfect" practice?



world literature



'Big Idea' Understanding:

Great literature from various cultures explores enduring themes and reveals recurrent aspects of the human condition.

Essential Question:

How can stories from other places and times be about me?



friendship



'Big Idea' Understanding:

True friendship is revealed during hard times, not happy times.

Essential Question:

Who is a 'true friend' and how will you know?

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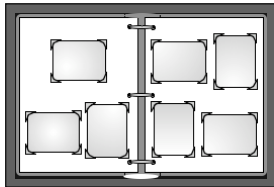
*Think like an assessor,
not an activity designer!*



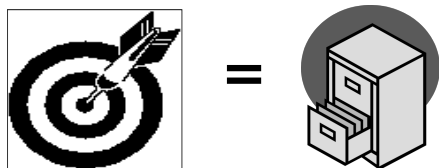
Design assessments *before*
you design lessons and
activities.
Be clear about what evidence
of learning you seek.

Think "Photo Album" versus "Snapshot"

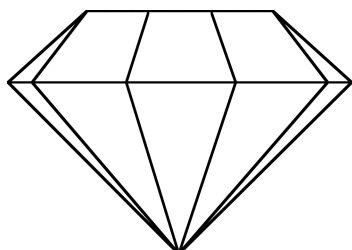
*Sound assessment requires multiple
sources of evidence, collected over time.*



Match the Assessment Evidence with the Learning Goals

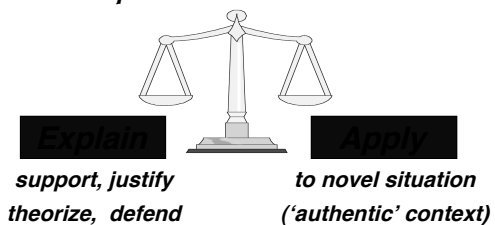


What is Understanding?



Evidence of Understanding...

requires the student to:



Facet #1: Explanation



- ◆ To understand is to know not only *what* and *when* but *why* and *how*.
- ◆ The student must not just *do*, they must *explain* and *support* (the dissertation and its defense).

example:

Teach a Lesson



You have been asked to help a third grader understand the economic concept of "supply and demand". Design a plan for a 10 minute lesson. You may wish to use examples (e.g., Beanie Babies or Pokemon cards), visuals, or manipulatives to help them understand.

example:

You Are What You Eat



Since our class has been studying nutrition, the first grade teachers have asked us to help their students learn about healthful eating. Your job is to create a picture book to use in explaining what a 'balanced diet' is. Include pictures to show health problems that result from poor eating habits.

example:

What's the Trend?



Interpret the data on _____ for the past _____ (time period). Prepare a report (oral, written) for _____ (audience) to help them understand:

- what the data shows
- what patterns or trends are evident
- what might happen in the future

example:

Tell a Story



Imagine that you are an elderly tribal member who has witnessed the settlement of the plains by the "pioneers". Tell a story to your granddaughters to show the impact of the settlers on your life.

Facet #3: Application



- ◆ Understanding is revealed through the ability to use knowledge effectively in varied contexts (i.e., transfer).
- ◆ Emphasize "authentic" performance – students apply knowledge in meaningful, "real-world" contexts to show that they *really* understand.

Authenticity Matters...



Therefore:

- ✓ Understanding is revealed through contextualized performance.
- ✓ Students apply knowledge in meaningful, "real-world" contexts to show that they *really* understand.

example:

Day Care Center



You have been hired by a day care agency to fence in an area to be used for a play area. You have been provided with 60 feet of fencing (in 4' sections) and a 4' gate. How can you put up the fence so the children will have the maximum amount of space in which to play?

Submit your plan for the playground area. Include a diagram, your calculations, and a summary of why this is the best design.

example:

State Tour



The State Department of Tourism has asked your help in planning a four-day tour of (*your state*) for a group of foreign visitors. Plan the tour to help the visitors understand the state's history, geography and its key economic assets.

You should prepare a written itinerary, including an explanation of *why* each site was included on the tour.

example:

Provincial Tour



The Provincial Department of Tourism has asked your help in planning a four-day tour of (*your province*) for a group of foreign visitors. Plan the tour to help the visitors understand the province's history, geography and its key economic assets.

You should prepare a written itinerary, including an explanation of *why* each site was included on the tour.

example:

What's the Trend?



Interpret the data on _____ for the past _____ (time period). Prepare a report (oral, written) for _____ (audience) to help them understand:

- what the data shows
- what patterns or trends are evident
- what might happen in the future

example:

Mail-Order Friend



Imagine that you could order a friend from a mail-order friends catalog. Before ordering, think about the qualities that you value in a true friend. Then, make sure that you speak clearly so that the salesperson will know exactly what type of person to send you.

example:

Personal Trainer



As a fitness trainer, your task is to design a personalized plan to help a client meet their fitness goal. (Client goals and characteristics are provided.)

Your fitness plan should include aerobic, anaerobic and flexibility exercises along with a proposed nutrition regimen.

example:

Public Advocacy



After investigating a current political issue, write a letter to a public policy maker regarding the official's position on that issue. Assume that his public policy maker is opposed to your position. (Students will be provided documentation of public policy maker's position and background information.)

Your letter should present your opinion and attempt to persuade the public policy maker to vote accordingly.

Source: Littleton High School, CO

example:

Making the Grade



Your math teacher will allow you to select the method (i.e., *mean*, *median* or *mode*) by which your quarterly grade will be calculated.

Review your grades for quizzes, tests, and homework to decide which measure of central tendency will be best for your situation. Write a note to your teacher explaining *why* you selected that method.
